water, which they fetch wholly from Springs, whereof the Country is fo full, that there is not a houfe but hath one nigh the door.

Advertifement concerning the Quantity of a Degree of a Great Circle, in Englifh *meafures.*

SOme while fince an account was given * concerning the *Quantity of a Degree of a great Circle*, according to the tenour of a printed *French* Difcourfe, entituled *De la Mefure de la Terre.* The Publifher not then knowing what had been done of that nature here in *England*, but having been fince directed to the perufal of a Book, compofed and publifhed by that known Mathematician *Richard Norwood* in the year 1636, entituled *The Seaman's Practice*, wherein, among other particulars, the compafs of the *Terraqueous Globe*, and the *Quantity of a Degree* in *Englifh* meafures are deliver'd, approaching very near to that, which hath been lately obferv'd in *France*; he thought, it would much conduce to mutual confirmation, in a fummary Narrative to take publick notice here of the method ufed by the faid *Englifh* Mathematician, and of the refult of the fame; which, in fhort, is as follows:

A. 1635 the faid Mr. *Norwood*, Reader of the Mathematicks in *London*, obferv'd, as exactly as he could, the Summer-Solftitial Meridian Altitude of the Sun in the middle of the City of *York*, by an Arch of a Sextant of more than five foot *radius*, and found it to be 59 *deg.* 33'. And formerly (*vid. A.* 1633.) he had obferv'd the like Altitude in the City of *London* near the *Tower* to be 62 *deg.* 1'. Whereupon he actually meafured, for the moft part, the way from *York* to *London* with Chains, and where he meafur'd not, he paced it, (wherein, *he faith*, through cuftom he ufually came very near the truth;) obferving all the way he came, with a *Circumferentor*, all the principal Angles of pofition or windings of the way, with a competent allowance for other leffer Windings, Afcents and Defcents; not laying thefe down by a *Protractor* after the ufual manner, but framing a *Table* much exacter and fitter for this purpofe; as may be feen in the *Englifh* book it felf. And by this Method and Meafure he found the Parallel of *York* from that of *London* to be 9149 chains, every chain being fix poles or ninety nine feet, 16½ *Englifh* feet to a Pole. Now, thefe 9149 Chains being equal to 2 *deg.* 28'. (the aforefaid Latitude between thofe two Cities) a little calculation makes it appear, that *one Degree* of a Great Circle, meafured on the Earth, is 367196 of our feet, *numero rotundo* 367200, or 22254 Poles; which make 556 Furlongs and 14 Poles,

* *See* N. 112, *and* N. 124 *of thefe Tract.*

14 Poles, or 69½ *English* miles and 14 Poles; 8 Furlongs to a mile, and 40 Poles to a Furlong. Which being compared to that measure of a Degree, which is deliver'd in the above-mention'd *French* Discourse, will be found to come very near it, they finding 73 miles *ferè*, at 5000 feet to an *English* mile, which make 365000 feet; whereas the 69½ *English* miles and 14 Poles, found by Mr. *Norwood*, amount to 367200 feet, reckoning 5280 feet to an *English* mile, as the true measure of it is; whence the difference between these two measures appears to be no more than 2200 feet, which is not half an *English* mile by 440 feet.

If any one desire to know further the whole *Circumference*, as also the *Diameter* and *Semidiameter* of the said Terraqueous Globe, according to this measure, he will easily find,

The Circumference to be	25056 *ferè*.
The Diameter,	7966
The Semidiameter,	3983

Observations made of the late Solar Eclipse on the first of June, 1676. ft. v.

One, by *Francis Smethwick* Esquire, as followeth:

I *Nitium defectionis* Westmonasterii *h.* 7. 50'. ⎫ *post med. noctem*
  Finis,   *h* 9. 54¾. ⎭ Junii 1. 1676.

  Totius Eclipsis duratio, horæ 2. 4' ¾.

Tempus observatum fuit cum horologio oscillitario, vibrante minuta secunda, & correcto per observationes. Tubus adhibitus fuit bonæ notæ, pedum 7½.

The other, by Mr. *Colson* at *Wapping*, near *London*, as followeth;

Temp. juxta horol. oscill.	Phases.	Solis alt.	Tempus correct. ex altit.	
h. ' "		° '	h. ' "	
7.34.50		22.46	7.36. 0	
7.37.14		33.10	7.38.40	
7.39.10	dig.	33.30	7.40.48	
7.50.40	¼	———	7.51.51	Tubo optico æstim.
dub. 8. 8.34	1¼	———	8. 9.45	Tubo optico mensur.
8.17.25	2⁵⁄₁₀	———	8.18.36	
8.27.10	3¹⁄₁₀	———	8.28.21	
9.39.—	1⁷⁄₁₀	———	9.40. —	Tubo æstim.
9.43.—	1⁶⁄₁₀	———	9.44. —	
9.48.—	¼	———	9.49. —	
9.54.25	non finita	———	9.55.36	
9.55.55	finita.	———	9.57. 6	
4.26. 5	Solis alt.	32.10	4.26.56	
4.28.58		31.53	4.29.52	
4.31. 21		31.31	4.32.16	

Aa